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ABSTRACT

Following several "quality of life" models and a model of schooling, researchers developed a "quality of school life" model with four dimensions, including general satisfaction, positive affect, negative affect, and domains specific to education. The domains relate to students' personal experiences regarding particular school functions and comprise status achievement (related to schools' supervision function), identity development (related to socialization), feelings of adventure in learning (related to instruction), and provision for future opportunities (related to certification). To test this model, the researchers twice surveyed approximately 1,000 15-year-old students in 250 public and private secondary schools in Australia. Statistical analysis using congeneric testing and factor analysis led to a refined model with improved statistical reliability and validity. The refined model of the quality of school life embraced six factors, including general well-being, negative affect, teacher effects, future opportunities, and status and identity feelings. (Author/RW)

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THE QUALITY OF SCHOOL LIFE

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ABSTRACT

THE QUALITY OF SCHOOL LIFE

This paper reports work on the conceptualization, definition and measurement of the quality of life in schools from the perspective of students. A model of the quality of school life is developed by drawing on more general 'quality of life' models found in the literature on social indicators, and on a model of schooling developed by Spady and Mitchell. Data on a national sample of Australian 15-year-olds are used to examine the validity and reliability of the several scales involved.

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THE QUALITY OF SCHOOL LIFE

In 1972 Christopher Jencks commented on an aspect of educational inequality generally recognized but seldom given explicit consideration in educational research:

> 'Some schools are dull, depressing, even terrifying places, while others are lively, comfortable, and reassuring ... such differences are enormously important and eliminating these differences ... would do a great deal to make the quality of children's (and teacher's) lives more equal. Since children are in school for a fifth of their lives, this would be a significant accomplishment.' (Jencks et al., 1972, p.256).

Jencks is talking about the quality of school life.

The conceptualization, definition and measurement of this aspect of schools and schooling is the substance of this paper. The material which follows describes: the development of a model conceptualizing the dimensions of quality of life within schools from the perspective of students; the operationalization of this model in the form of a self-report Likert-scale measure; and, the psychometrics of the several scales involved.

THE QUALITY OF LIFE IN SCHOOLS

Much of what we know about the 'quality of school life' appears to have evolved in conjunction with models of student learning, as an interest in non-cognitive influences on achievement. Motivation and ability have always been part of the achievement equation and student attitudes to school, teachers or courses have been built into these models in attempts to capture the motivational components of achievement. The main thrust of this argument is that students who are happier, more enthusiastic, more engaged in life within schools are, ceteris paribus, likely to learn more and perform better on achievement tests. The 'Like School' scale developed for use in the cross-national studies of educational achievement, the IEA studies, reflects this argument (cf. Húsen, 1967). However, as Epstein and McPartland (1976) point out, there has been little systematic study of the aspects of school

life that evoke those feelings, probably because the quality of students' school lives is seen more as a means to an end rather than an end in itself.

Something more of a concern with the quality of teachers' school lives as such is apparent, principally in the educational administration literature where studies of job-satisfaction are reasonably common; for example, Holdaway (1978). This same literature also reflects a concern with the organizational climate of schools as reflected mainly in teacher attitudes, and the relationship of this climate to organizational effectiveness and efficiency. The Halpin and Croft (1963) work on this subject is one of the better known examples. Ultimately, however, this too is justified in terms of its effects on student achievement - teachers who are happier and at one with their principal will function more effectively in their teaching role and the school as an organization will run smoothly, to everyone's benefit.

The Quality of Students' School Lives

This investigation focusses on the quality of life in schools as this is experienced by students, and attention is given to the meaning of the notion, its dimensionality and its measurement. Subsequent research will look at the reasons for differences in the quality of students' lives, Jencks' concern, the effects of these differences on achievement, and the quality of teachers' lives.

In looking at what is known about the quality of students' lives within schools, two main approaches to this question are apparent and are distinguished principally by their level of aggregation: school climate studies which aggregate individual values, beliefs and (sometimes) behaviors into dimensions which characterize the collectivity under examination (school or classroom); and attitude studies which tend to focus on individual variation in feelings about school. Since both work from individual level data in the first instance, the possibility of translating the one into the other by either disaggregation or aggregation is obvious.

School Climate. A recurrent theme in the literature about schools is that schools differ along some global dimension variously identified as 'climate', 'feel' or 'tone'. Most of the statements look like the two which follow: 'Anyone who visits more than a few schools notes quickly how schools differ from each other in their "feel"' (Halpin, 1966, p.131); 'Some schools are cheerful and hum with excitement and purpose. Others seem to lack enthusiasm. Some classrooms are alive with expectancy. Others appear moribund'. (Kelley, 1980, p.1).

Since the late 1950's a variety of measures with a variety of theoretical perspectives - and some with none - has emerged. One of the earliest was the Pace and Stern (1958) work on the psychological characteristics of college environments based on Murray's (1938) needs-press theory of personality development. In 1963 Halpin and Croft published their work on the organizational climate of schools in the form of the well-known OCDQ, with its eight dimensions of school climate, as seen by teachers - disengagement, hindrance, esprit, intimacy, aloofness, thrust, production emphasis and consideration. Stern extended his earlier work on college environments to develop the High School Characteristics Index (HSCI) as a means of 'objectively' assessing the climate of individual schools through student perceptions, using 30 scales such as Abasement-Assurance, Deference-Restiveness, Narcissism, and Sensuality-Puritanism (Stern, 1970). Moos and associates generalized their interest in the characterization of work environments to include a Classroom Environment Scale (Trickett and Moos, 1974) which comprises nine subscales: involvement, affiliation, teacher support, task orientation, competition, order and organization, rule clarity, teacher control, and innovation. Moos (1978) later developed a five-fold typology of classrooms using these measures and related them to measures of student satisfaction with life in the classroom, teachers, courses and other students.

Student Attitudes. Studies of student attitudes to self and aspects of life in school abound in the literature. Some focus on the development of these attitudes (Dreeben, 1968, for example) but most are concerned with effects on achievement and/or commitment to school. Much of the work by educational psychologists takes a 'mental health' approach with the result that studies of neuroticism, introversion-extroversion, anxiety, self-concept and the like are common in this literature. The extensive use of Rotter's (1966) internal-external control scale - in the well-known Equality of Educational Opportunity study (Coleman et al., 1966), for instance - is a good example of the belief in attitudinal effects of this kind. The interest of sociologists in the relationship between personality and social structure, particularly the development of alienation and related constructs, when focussed on schools and students also reflects this orientation; see for example, Stinchcombe (1964) and Otto and Featherman (1975).

Research into student attitudes to life in schools is also reasonably well represented in the literature, though not by what one would call major studies focussing specifically on this issue. Jackson (1968) and Silberman (1971) provide illustrative reviews of these investigations which use straightforward student evaluations of life in school, life in classrooms, teachers, peers, school subjects, extracurricular activities and so on.

One widely used measure of students' attitudes towards school and schooling is the so-called 'Like-School' scale developed for use in the cross-national studies of educational achievement, the IEA studies. The scale is reported in Husen (1967, p.121) and consists of eleven items of which the following are examples - 'I generally like my school-work', 'I find school interesting and challenging'. While there is no explicit theoretical basis for the scale, it seems to be measuring general satisfaction with school and, in the context of these studies, is treated as an influence on achievement.

Quality of School Life. In 1976 Epstein and McPartland reported on the development of a measure of quality of school life that took its theoretical perspective from an emerging literature concerned with the quality of (adult) life. Their measure incorporated three scales: a measure of general satisfaction with school containing items of the kind, 'I like school very much'; a scale measuring commitment to classwork of which one item was 'Work in class is just busy work and a waste of time'; and a reaction to teachers scale focussing on student-teacher relationships - for example, 'I wish I could have the same teachers next year'.

This measure appears to be the first and only one to generalize from models of quality of adult life to the quality of life that students experience in school. The argument developed in the present investigation takes the same starting point but develops a somewhat different model of the quality of school life. The details of this development are the concern of the remainder of this paper.

QUALITY OF LIFE AND QUALITY OF SCHOOL LIFE

The structure and part of the content of the model was developed as a direct analogue of the more general 'quality of life' measures found in the literature on social indicators. These indicators, 'measurements of the social life of members of a society' (Land and Spilerman, 1975, p.1), tend to be derived from one of three measurement domains in the life-space of an individual: objective conditions; subjective value-context; and subjective well-being (Sheldon and Land, 1972, p.39). Objective conditions are the external physical and social conditions of the individual's existence, such as crime rates, housing quality and income; subjective value-context refers to the individual's beliefs, expectations, and aspirations; and subjective well-being is concerned with the individual's feelings, satisfactions, and frustrations about components of the first two sets. While 'Quality of Life'

has sometimes been used to refer to objective judgements of quality, such measures as crowding, reported crimes, and decibels of noise pollution, for example, more often it refers to subjectively known and evaluated aspects of life (Andrews and Withey, 1976, p.4). This latter approach is adopted here.

Quality of Life

Gerson (1976) outlines two traditional approaches to defining quality of life: an individualist orientation which sees individual achievement as the determinant of quality of life; and a transcendentalist orientation which views an individual's quality of life as deriving from his/her contribution to the larger social order. The first of these approaches is adopted in much of the writing on this subject and is the one that guides this investigation. Thus, for the present purposes, 'quality of life is measured by the degree to which an individual succeeds in accomplishing his desires despite the constraints put upon him by a hostile or indifferent nature, God or social order' (Gerson, 1976, p.794).

Burt et al. (1978) adopt this same definition in arguing that an individual's evaluation of his/her quality of life derives from the level of consumption of socially valued goods and services relative to socially prescribed norms. The more one exceeds the norm the higher one's evaluation of the quality of his/her life. They consider as well a second source of the feelings of well-being that underlie individual reports of quality of life; 'the extent to which an individual feels he has the power to determine his individual well-being within society' (Burt, 1978, p.367). Thus, for example, the more an individual's income exceeds the norm and/or the more he feels that he has the power to determine what his income will be, the higher his feelings of well-being.

This individualist approach to defining the nature of quality of life, and the sources of individual differences, is characteristic of most of the literature on the subject. In fact, much of the early work was undertaken as

a part of mental health surveys (for example, Gurin et al., 1960; Bradburn and Caplovitz, 1965; Cantril, 1965) which included some questions about the general state of happiness of the individual, happiness being seen as a pervasive quality of experience that could be represented by a single measure. The results of this work generated an interest in happiness or well-being as a subject in its own right, and in the development of appropriate social indicators.

Bradburn's work (Bradburn 1969) is central to this development in its concern with the psychological reactions of normal individuals to the stresses and strains of everyday life. He argued that individuals have a number of different experiences each day - sometimes they are all good, sometime all bad, but mostly they are a mixture of pleasant/unpleasant, soothing/vexing, ego-building/ego-destroying. The sum of these experiences can be expressed as three dimensions of well-being: overall feelings of well-being or satisfaction with their life as a whole; positive affect, a feeling state tapped by questions about 'good' feelings experienced over the past week; and negative affect, a feeling state expressed in reactions to questions about loneliness, boredom and depression. Variations in negative affect were associated with factors such as inter-personal tensions, and work-related and marital adjustments, and individual differences in positive affect were linked to factors such as degree of social participation. Unexpectedly, negative affect appeared not to be just a reflection of positive affect; an individual who reported high levels of positive affect did not necessarily report correspondingly low levels of negative affect, although both dimensions were related in the expected direction to overall self-ratings of well-being. Moreover, he found that the best prediction of overall well-being was, in fact, the discrepancy between positive and negative affect, and that the two feeling states had different patterns of correlations with other variables measured. The result was an argument that

feelings of well-being derived from the relative balance of positive and negative affect and on this basis Bradburn developed his Affect Balance Scale. See, however, Cherlin and Reeder (1975) for comments on the usefulness of this scale.

In the mid-70's two major studies (Campbell et al, 1976; Andrews and Withey, 1976) provided the basis for the current state of research into social indicators of the quality of life. Both extended existing models of quality of life to include, as well as measures of general satisfaction and positive and negative affect, measures of satisfaction with specific domains of life activity. These domains covered aspects of an individual's life, such as health, marriage, job, neighbourhood, religious faith, operation of local government, and friends. Measures of these more specific domains of life provided additional, detailed information on quality of life experiences, and made it possible to 'examine the patterns of relationships between the specific measures of satisfaction and the contribution of each specific measure to an overall measure of life satisfaction' (Campbell et al., 1976, p.12).

Two years later Burt et al. (1978) summarized the emerging structure of these quality of life models and argued for four dimensions - general satisfaction, positive affect, negative affect, and satisfaction with domains - which, with the exception of positive and negative affect, are correlated with each other. This structure is detailed in Burt et al. (1978, p.387) and modified somewhat in Burt et al. (1979).

In summary, it seems reasonable to think about a model of quality of life in terms of four dimensions defined as follows.

(1) General affect. This facet involves the individual's feelings about his/her life as a whole; it calls for a general evaluation from an absolute perspective, using the full range of experience. It has been measured with questions such as 'How do you feel about your life as a whole?' (rated on a

seven-point scale, from 'delighted' to 'terrible'); and 'Where would you put your life as a whole on a feeling thermometer?' (scale from very cold to very warm). See Andrews and Withey (1976, p.66).

(2) Positive affect. This dimension comes from Bradburn's (1969) work and is concerned with a number of more specific positive qualities of life-as-a-whole, such as pride and excitement, contentment, enjoyment, fulfilment. This type of affect has been measured with questions like 'During the past few weeks did you ever feel ... particularly excited or interested in something? ... proud because someone had complimented you on something you had done?'

(3) Negative affect. The second of the dimensions developed by Bradburn is concerned with specific negative qualities of life-as-a-whole, such as loneliness and depression. These qualities have been assessed with questions such as 'During the past few weeks did you ever feel ... very lonely or remote from other people? ... depressed or very unhappy?'

(4) Domains. Campbell et al. (1976, p.61) capture the need for and meaning of domains: 'The utility of global assessments is somewhat limited, unless they are fleshed out with more detailed information about reactions to more specific domains of life ... we might expect that whatever global report an individual gives as to his overall sense of well-being should be some compound of his gratifications and disappointments with more specific features of life: his housing, his financial situations, his friendships, and the like'. Individuals' reactions have been measured to specific domains of life such as family, housing, neighbourhood, standard of living, local facilities, education, leisure, the government, friendships, and work. Appropriate questions would be, for example, 'How do you feel about the services you get in this neighbourhood? ... the way you should spend your spare time? ... how you get on with other people?'

Quality of School Life

The structure and part of the content of the model was developed as a direct analogue of these quality of life dimensions. With the exception of the domains, the 'school life' parallels of general affect, positive affect and negative affect are straightforward. One can think of and report on overall feelings of satisfaction with school, and the degrees of positive and negative affect that arise as part of life in school. To parallel the illustrative items noted in the preceeding section: general affect - 'How do you feel about your life in school as a whole'; positive affect - 'During the past few weeks did you ever feel particularly excited or interested in something at school?'; and negative affect - 'During the past few weeks did you ever feel very lonely or remote from other people at school?'

Domains

In the quality of life literature, 'education' is one of the domains of life. As a result, this literature offers no guidance about the domains of schooling. However, as defined earlier, feelings of well-being in each domain are derived from two sources. The first concerns the level of an individual's consumption of socially valued goods and services relative to socially prescribed norms. The more one exceeds the norm, the higher the levels of well-being. Second, feelings of well-being also depend on 'the extent to which an individual feels that he has the power to determine his individual well-being within society' (Burt et al., 1978, p.367).

Thus, the problem faced in identifying domains was one of defining the goods and services provided by schools and valued by students, goods and services to which students had different degrees of access and over which they had different degrees of control. These categories of goods and services would define the domains of schooling in a way similar to that in which such factors as occupation, income, and health define the domains of quality of life in general.

The nature of these categories of valued goods and services - the domains - were developed by drawing on a theory of schooling that links social-structural and individual systems of action in schools. This theory is developed in a series of papers by Spady and Mitchell and is discussed in detail below. Within this context an argument is developed to support the existence of four domains of schooling - status, identity, adventure and opportunity.

Domains and the Spady-Mitchell Model

Spady and Mitchell draw on both structural-functional and symbolic-interaction schools of sociological theory to construct a model of schooling. This model sees schools as organizations through which individuals are linked to larger social collectivities; in fact, the school is seen as 'an action system for integrating individual expectations for personal fulfilment with societal expectations for the schools to develop the structures necessary to provide for the nurture of personal development, competency, responsibility and integration among students' (Mitchell and Spady, 1977, p.41).

At the societal level the authors seem to draw on Talcott Parsons' specification of the four functional problems faced by social systems at any level of aggregation, Parsons' 'functional imperatives' that constitute the familiar AGIL paradigm - adaptation, goal attainment, integration, and latency. They define four broad societal level expectations responsible for the creation and maintenance of schools, 'expectations (that) can best be described in terms of certain characteristics thought to be important for adult citizens to possess in order to enter and participate in a society which is productive, orderly, and attractive to its members'. Schools are expected to:

(1) facilitate and certify the achievement of technical competence, in effect, to certify that individuals are capable of doing tasks valued in the society at large;

(2) encourage and enhance personal development in the form of physical, emotional, and intellectual skills and abilities;

(3) generate and support social integration among individuals across cultural groups and within institutions;

(4) nurture and guide each student's sense of social responsibility for the consequences of his/her own personal actions, and for the character and quality of the groups to which the student belongs. (Mitchell and Spady, 1977, p.9)

In response to these societal expectations schools have developed organizational structures whose function is to translate these expectations into action within the school, and these structures are:

(1) certification structures, which enable students who have reached agreed standards of technical competence to qualify for certificates, rewards, promotions and the like;

(2) instruction structures, which facilitate personal development through learning and exploration;

(3) socialization structures, which emphasize student participation in the social system of the school in order to achieve social integration;

(4) supervision structures, which engender the development of social responsibility in students through adjustment to and learning of prevailing social norms and values.

Societal expectations can be met, and school organizational structures operate successfully, only if students are attracted to these outcomes and respond to the school processes which embody them. There are four major areas of student experience or conditions of motivation corresponding to the

four societal expectations and school structures, and these can be represented as follows:

Societal expectations	School structures	Student experiences
Technical competency	Certification	Opportunity
Personal development	Instruction	Adventure
Social integration	Socialization	Identity
Social responsibility	Supervision	Status

From the student's perspective, certification processes, which embody performance standards, are only attractive if they enable the student to qualify for desirable and real future opportunities; the concern here is for the relevance of schooling. The key to instructional effectiveness in the personal development of the student is the experience of adventure in learning, an experience which is intrinsically rewarding and leads to self-motivation. The main motivating factor governing the realization of social integration outcomes is identity formation, the development of self-awareness in relation to the larger society. Acquiring a sense of social responsibility - subordinating personal interests to the general welfare - is dependent upon the student achieving status in the group, an acknowledgment of the prerogatives and prestige of the student.

Spady and Mitchell develop the model in some detail beyond this point in three papers (Spady and Mitchell, 1979; Mitchell and Spady, 1977; and Spady and Mitchell, 1977) and elaborate the student and teacher behaviors characteristic of the individual and organizational action systems of the school. However, for the purposes of the present study, further development of the model need not be undertaken; the focus is on the outcomes of these processes as they are experienced by students.

Defining the Constructs

It is difficult to find precise definitions of the key variables in the papers by Spady and/or Mitchell. The extent to which meanings are considered

explicitly is outlined in the definitions below, which are derived from Mitchell and Spady (1977, pp.7-9, 35-38). Page numbers are given in parentheses at the end of each quotation.

Identity: 'The inward experience of being to symbolize for oneself an answer to the question "Who am I?"... in relation to the larger society' (7).

Adventure: 'involves experiencing the future within the present ... involves a sense of immediacy and encounter with future possibilities so that excitement and stimulation from these possibilities infuse present actions' (9).

Opportunity: 'an experience of future possibility within the present moment ... opportunity is both a personal experience and a property of organizational structures' (8).

Status: 'is created by the very existence of organizations which differentiate and order relationships among individuals ... through the development of systems of social recognition and privilege' (7-8).

These 'definitions' do not provide an adequate basis for the writing of items to tap the constructs; they are indications of the sources of these constructs in organizational processes rather than definitions of the constructs themselves. However on this basis and with the help of general and technical dictionaries the constructs were defined in the following way:

Identity (I). The important components seem to be feelings of self-awareness, of individuality - a kind of consciousness of self - and this is consistent with the Spady-Mitchell notion of 'Who am I?' in relation to the school society.

Adventure (A). Adventure really comes down to feelings of adventure during learning; essentially, some kind of self-motivation to learn and explore where learning becomes an end in itself and is intrinsically rewarding.

Opportunity (O). This construct refers, essentially, to the belief that what one learns in school will be useful in the future, will be a resource that will provide opportunities; in short, a belief in the relevance of schooling.

Status (S). In this case status seems to refer to the individual's perceptions of the relative degree of prestige accorded him by significant others.

MEASURING THE QUALITY OF SCHOOL LIFE

Items for the general affect, positive affect and negative affect scales were written as straightforward adaptations of those in quality of life measures, with the latter two five-item scales as analogues of Bradburn's (1969) positive and negative affect measures. Domain items were written to reflect the definitions outlined above.

The Development of Version I

In April and May 1979 trial testing of preliminary items was carried out using 353 Year 10 students in five secondary schools. The data obtained led to the first formal version of the Quality of School Life questionnaire which contained 81 items distributed as follows: general affect - 2; positive affect - 5; negative affect - 5; status - 18; identity - 18; adventure - 17; and opportunity - 16. Each item was written as a continuation of the stem phrase 'School is place where ...'. Responses were provided for on a five-point scale ranging from 'Strongly Agree' to 'Strongly Disagree' through 'Agree', 'Half Agree', and 'Disagree'. This questionnaire was administered in July 1979 to a national sample of approximately one thousand 14-year-old students in 250 government and non-government schools as part of a larger project involving these students.

The Development of Version 2

Subsequent work aimed at the refinement of the measure took two forms: revised items; and a changed response scale.

Item Revisions

Items were deleted or reworded and new items were added to the scale on the basis of three kinds of information; traditional item analyses; the results of factor analyses undertaken on items within each domain, and on the total group of items; and, qualitative data on the items obtained from students as part of an associated case-study.

As a result of these explorations the second version of the questionnaire contained 71 items distributed as follows: General affect-4; Positive affect-5; Negative affect-5; Status-14; Identity-15; Adventure-13; and, Opportunity-15. Existing items were selected unchanged or with slight changes in wording, and new items written on the basis of these statistical and judgemental criteria with the following results: 26 items were selected unchanged; a further 11 were included after some rewording; and 34 new items were added. These items were administered in July 1980 to the same students who completed the first questionnaire. 980 usable questionnaires were obtained.

Response Scale

Despite some traditional misgivings about the usefulness of 'middle' or 'neutral' categories in response scales, the first version of the questionnaire contained a 'half agree' middle category. This category was included on the assumption that it might capture responses mid-way along a five-point scale rather than serve simply as a catch-all for the uncertain and/or the unwilling. The standard argument asserts that those answering neutral categories of this kind are a heterogeneous group consisting of those who do not understand the question, those who have no opinion, those who are

ambivalent, plus those with low intensity opinions, both positive and negative. The second part to this argument important here is that this heterogeneous category inflates the amount of error variance in measures of association between items in ways not entirely predictable (cf. Presser and Schuman, 1978, p.4).

For reasons that had as much to do with intuition as statistics the traditional view regarding middle categories was adopted and the middle category was deleted from the second questionnaire to produce a four-point response scale ranging from 'strongly agree' through 'agree' and 'disagree' to 'strongly disagree'. This judgement gains support in comparisons of items common to the two questionnaires and, of course, answered by the same individuals. Evidence that the middle category was problematic in Version 1 came from crosstabulating Version 1 and Version 2 responses for each of the 25 items common to both questionnaires. On the average some 80 per cent of those responding to the middle category on the first questionnaire responded to either the 'agree' or 'disagree' categories in the second. Moreover, less than one per cent on average failed to give any response at all to the four point scale. Taken together these findings suggest that most of the 'half agree' respondents to questionnaire 1 items were those holding low intensity opinions. Similar support was obtained from the factor analyses undertaken in that reasonably clear and interpretable structures emerged from the data where they had not before and, moreover, these structures approximated those proposed by the theoretical model.

Conventional Item Analyses

As a first step in the refinement of these items the data were subjected to conventional item analyses, scale by scale. This amounts to assuming that the theoretical structure which generated these items is correct and that the items actually go together as the theory suggests they should. The problem then becomes one of estimating the proportion of true score variance tapped

by these items, that is, the reliability of the scales. The results of these analyses are shown in Table I.

The four domain scales have acceptable reliabilities ranging from .79 for Opportunity to .83 for Adventure. The reliability of the three affect scales is lower, probably as a function of the length of these scales - four or five items in each.

Exploratory Factor Analyses

This initial step in the refinement process was undertaken with the view to producing a measure whose length overall would not exceed 50 items, that is, a measure easily completed within a class period. This step involved selection of the ten items in each of the four domains having the highest item-total correlations. These along with the 14 items from the three affect scales provided the data for an exploratory factor analysis designed to serve two purposes: to provide preliminary information on whether the latent structure postulated in the model - the three affect and four domain constructs - was supported by the data; and to provide the means by which further refinement could be undertaken, namely by eliminating items not clustering with the major groups or items that loaded across several factors.

Stage 1. Because the main focus of the analyses was on refinement of the scales a principal axes solution with iterated communalities was adopted and rotated subsequently to Varimax criteria. The number of factors rotated was based on Kaiser's (1958) eigenvalue-one criterion rather than substantive considerations. Nine factors were rotated in the first analysis. Six of these were defined by major clusters of items and provided the first clear support for the model adopted. A General affect factor was apparent but included both Positive affect and General affect items. The Negative affect items retained their identity as a clearly defined factor and factors identifiable as Status and Identity were also well defined. However, the Opportunity and Adventure items resorted themselves somewhat and emerged as

two factors, one to do with teacher-student relationships and defined by the Adventure and Opportunity items to do with teachers, and the other defined by the Opportunity items referring to self.

Stage 2. Using the criteria noted above nine items were eliminated and the remaining 45 items refactored using the same approach except that only six factors - corresponding to the number of interpretable factors in the preceding analysis - were rotated. The six factors rotated were interpretable in the same way as those in Stage 1: a General affect factor comprising General and Positive affect items; a Negative affect factor; Status and Identity factors based predominantly on the items postulated to define these constructs; a Teachers factor defined by the Adventure and Opportunity items that mentioned teacher-pupil relationships; and an Opportunity factor based on opportunity items relating to self. Items with factor loadings exceeding .4 are shown in Table II. In each case the loadings shown were the only loadings on the factor to exceed .4 and, thus, the six factors shown provide a clear interpretation, and one closely approximating the theoretical model adopted.

Stage 3. In the interests of producing a still more refined measure the five items with the highest factor loadings were selected within each scale, with the exception of Negative affect which had only four items. The Status scale provided a minor exception to this rule in that where loadings only differed by .01 or .02 those items defined *a priori* as Status items were chosen. A factor analysis of these 29 items showed the same six clearly defined factors and the factor loadings are shown in Table III. In each case the loadings shown are the only loadings to exceed .4.

In each of these analyses the six factors are clearly defined and it seems reasonable to argue for six dimensions to the quality of school life within the theoretical context of this investigation. These data provide support, with some qualification, to two of the three affect dimensions derived from

quality of life models, and to the domains of school life derived from the Spady-Mitchell model. There is evidence for General affect and Negative affect dimensions but none to distinguish Positive affect from General affect. Since both General and Positive affect differ only in the level of specificity with which they measure positive feelings of well-being at school this finding does not seem unreasonable. Similarly, the Spady-Mitchell model finds good support in these data, though not complete support. Status and Identity dimensions seem clearly defined and Opportunity, in a modified form relating to self alone, appears as a dimension. Adventure, however, does not appear as such. Instead Adventure and Opportunity items referring to teacher-pupil relationships cluster to identify a 'Teachers' factor. Since teachers loom large in the lives of students and have to be a major influence on the quality of students' lives this is not too surprising.

Measurement Models

To this point the data provide good support for the existence of six dimensions of quality of school life seen from the theoretical perspective of this investigation. Refinement of the item pool and evidence for the validity of the constructs themselves has come from exploratory factor analyses which produced emergent structures from the data, structures that approximate the theoretical arguments guiding the investigation. The analyses which follow take these items and attempt to provide a more exact test of the fit of the model to the data, along with estimates of the validity and reliability of the scales.

These analyses were undertaken scale by scale. In each case the form of the measurement model proposed initially is the same - a single latent variable or hypothetical construct is considered sufficient to account for the covariation among the observed indicators. In fact, the theoretical view adopted is that the latent construct is responsible for - that is, causes - all of the covariation among the indicators and contributes to the variance

of each. Seen in another way, the model assumes that variation in each indicator has common and unique components, a common part associated with the underlying construct and a specific part due to unrelated influences and measurement error - true score variance and error variance. This kind of measurement model is illustrated in Figure 1 where the construct - indicator relationships for a general model and for Negative affect as an example are portrayed as causal. This is analogous to the general factor analysis model (cf. Blalock, 1968; van der Geer, 1971). Measurement models of this kind are sometimes called congeneric test models (Jöreskog, 1971).

The nomenclature used is that of LISREL (Jöreskog, 1973) the statistical model used to fit these measurement models to the data. Consider the general model first. ξ represents the hypothetical construct (latent variable, factor) responsible for the observed covariation among the X_i, the responses to the questionnaire items. The λ_i are the factor loadings which indicate (when squared) the proportion of variance in X_i explained by ξ. The remaining variance in X_i is taken up in the error term θ.

The model for Negative affect is presented as an example. In this case, Negative affect is the latent variable responsible for the covariation among responses to the four items indicated, the values .80, .57, .53 and .58 shown are the factor loadings, while the .60, .82, .85 and .82 are the error terms accounting for variance in the X_i not accounted for by the Negative affect latent variable. These confirmatory factor analyses were based on the LISREL model (Jöreskog, 1973) and estimated with LISREL-IV (Jöreskog and Sörbom, 1978). LISREL - LInear Structural RELations - is a general statistical model which allows one to estimate the parameters of structural models which postulate a latent structure responsible for the observed patterns of covariation among measures. LISREL also provides a goodness-of-fit measure which tests the null hypothesis that the patterns of relationships among the observed variables postulated by the structural model are, in fact, not

different from those observed in the data. Thus, a significant chi-square and a rejection of the null hypothesis indicates a poor fit between the theory and the data. Munck (1979) provides a comprehensive discussion of the applications of LISREL.

Models analogous to that shown for Negative affect in Figure 1 were estimated for each scale separately in the first instance. That is, a single latent variable was postulated as sufficient to account for the covariation among the indicators in question and, thus, the covariation among the error terms was constrained to be zero. These measurement models provided adequate fits to the data in the case of Negative affect and Opportunity but not for the remaining scales. The fits of the General affect, Status, Identity and Teachers scales were improved subsequently by relaxing the constraints on the covariation of the error terms in the sense of allowing covariation between some of them. Details of the final models estimated for each of the six dimensions of quality of school life are presented in Table IV, as the standardized solution - that is, with the variance of the latent variable standardized to unity.

Table IV provides for each item the theoretical domain which it was assumed to tap originally, the factor loading which can be interpreted as a validity coefficient for the item (the correlation between the item and the construct), and the error variance or proportion of indicator variance not accounted for by the latent variable. Goodness-of-fit statistics and error term correlations are shown for each scale. These data indicate an acceptable fit of each scale to the data and thus one can be reasonably sure that each set of items is tapping a single latent construct, in the main. This is quite clearly the case for Negative affect and Opportunity which achieve good fits to the data without error correlations - all of the item covariation is accounted for by a single latent variable. It is less clear for General affect, Status, Identity and Teachers where the error

correlations indicate that the latent construct of interest in each case is insufficient to account for the covariation among the indicators in each set - these scales are somewhat impure.

Estimating the Validity of the Scale Composite Scores

As noted earlier, the definition of validity adopted here is tied to the factorial homogeneity of item groups and factorial heterogeneity, as reflected in the error correlations for four of the six quality of school life scales, degrades the validity of the measures. Validity in this sense is defined as the correlation between the latent variable and the item composite for the scale (cf. Heise and Bohrnstedt, 1970). The validity of composites produced for each of the six quality of school life scales is the substance of the following analyses.

Following Munck (1979, p.69) models of the kind illustrated in Figure 2 were developed for each of the six scales. The parameters of these models consist of the factor loadings linking the latent variable to its indicators, the error terms for these indicators, and the item weights that link the indicators to the composite.

The LISREL formulation of the general model shown in Figure 2 is

$$\begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ -\beta_{51} & -\beta_{52} & -\beta_{53} & -\beta_{54} & 1 \end{bmatrix} \begin{bmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \\ \eta_4 \\ \eta_5 \end{bmatrix} = \begin{bmatrix} 1 \\ \gamma_{21} \\ \gamma_{31} \\ \gamma_{41} \\ 0 \end{bmatrix} \xi + \begin{bmatrix} \zeta_1 \\ \zeta_2 \\ \zeta_3 \\ \zeta_4 \\ \zeta_5 \end{bmatrix}$$

$$\begin{bmatrix} y_1 \\ y_2 \\ y_3 \\ y_4 \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \end{bmatrix} \begin{bmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \\ \eta_4 \\ \eta_5 \end{bmatrix} + \begin{bmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \varepsilon_3 \\ \varepsilon_4 \end{bmatrix}$$

A variance-covariance matrix is analyzed and for this reason γ_{11} is fixed to unity to scale the latent variable. γ_{51} is fixed to zero to reflect the fact that the latent variable ξ does not contribute to the composite directly, only through the measured variables. The measured variables and

the composite are treated as η's, endogenous latent variables and, thus the γ_{ij} represent factor loadings while the β_{ij} denote item weights used in constructing the composite. The variance of the composite is completely explained by the model and for this reason η_5 has no error term.

With the variables in standardized form it can be shown that the validity of the composite, expressed as the correlation between the composite and the latent variables, is given by

$$\rho_{\xi T} = \sum_{1}^{4} \beta_{5i}\gamma_{i1}$$

the sum of the factor loading-by-item weight products.

The parameters of the model for Negative affect are shown as an example in Figure 2. The error terms are omitted in the interests of a simple presentation. The parameters shown as .80, .57, .53 and .58 are the γ_{ij}, the factor loadings which are identical to those reported in Table IV, as is the measure of fit. The parameters linking the items to the composite - .61, .24, .20 and .24 - are the β_{ij}, the item weights used in forming the composite.

The validities of both weighted and unweighted composites were estimated. Item weights for the weighted composites were the factor score regressions obtained from LISREL-IV while those for the unweighted composites were all unity. In these analyses, item weights were constrained to either the factor score regressions or unity, while the factor loadings were defined as free parameters. Table V reports the metric factor score regression weights for each scale along with the factor loadings and standardized item weights. In the initial LISREL solution the β_{ij} were constrained to equal the metric item weights indicated. The standardized item weights are taken from the standardized LISREL solution in which the variance of the latent variable is standardized to unity. Goodness-of-fit statistics are shown for each model as well and are identical to those shown in Table IV. The validity of each

scale was calculated from the standardized values in the way noted above and is reported in the fourth column. The reliability values shown are calculated as the square of the validity, the proportion of true score variance in the composite.

The data reported in Table V suggest that composite scores produced from the items tapping each of the six quality of school life dimensions will show a high correlation with the latent variable in question - a correlation ranging from .87 to .95 - and, thus, are highly valid measures of these latent constructs. On this basis it seems reasonable to argue that the 29 items in question provide valid measures of the six dimensions of quality of school life and comprise an instrument to measure this multidimensional construct that has firm theoretical and empirical support.

Discriminant Validity

The question of the discriminant validity (Campbell and Fiske, 1959) of the several scales was considered. Correlations among the six composites are detailed in the upper triangle of Table VI, while the lower triangle reports these same correlations corrected for attenuation due to measurement error. These disattenuated correlations were estimated using LISREL by formulating the following model.

$$\begin{pmatrix} x_1 \\ x_2 \\ x_3 \\ x_4 \\ x_5 \\ x_6 \end{pmatrix} = \begin{bmatrix} .92 & 0 & 0 & 0 & 0 & 0 \\ 0 & .87 & 0 & 0 & 0 & 0 \\ 0 & 0 & .95 & 0 & 0 & 0 \\ 0 & 0 & 0 & .89 & 0 & 0 \\ 0 & 0 & 0 & 0 & .91 & 0 \\ 0 & 0 & 0 & 0 & 0 & .89 \end{bmatrix} \begin{pmatrix} \xi_1 \\ \xi_2 \\ \xi_3 \\ \xi_4 \\ \xi_5 \\ \xi_6 \end{pmatrix} + \begin{pmatrix} \delta_1 \\ \delta_2 \\ \delta_3 \\ \delta_4 \\ \delta_5 \\ \delta_6 \end{pmatrix}$$

That is, each latent variable (ξ_i) was defined by one indicator, the composite score (x_i) and the factor loading in each case (λ_{ii}) was constrained to the value of the validity coefficient shown in Table V. To scale the latent variables the diagonal elements of the variance-covariance matrix for the latent variables (Φ) were constrained to unity while the off-diagonal elements were free parameters to be estimated. The values

obtained are shown in the lower triangle of Table VI. Since the validities of the composites are approximately equal the same pattern of correlations is observed though each, of course, is somewhat larger than its attenuated counterpart.

The highest of the attenuated inter-composite correlations are those between General affect and the other composites - around .5 in each case. Since General affect is an overall measure of quality of school life, one would expect it to be correlated with more specific measures of affect and, thus, the fact that it holds some 25 per cent of its variance in common with Negative affect and each domain fits with expectation. Correlations among the latter range from -.26 to .47; that is, these composites share between six per cent and 22 per cent of their variance. Given that the reliabilities of the scales range from .76 to .91, the correlation between equivalent forms of each scale far exceeds the correlations between scales - evidence, we suggest, of acceptable discriminant validity.

SUMMARY

These analyses offer substantial but not complete support to the theoretical model that guided the development of the measure. Where the data departed from theoretical expectations one cannot, of course, be sure whether it is the theory or the data that is in error. It may be that the theory does not reflect the real world quite the way it is, or it may be that we have not been able to operationalize the theoretical constructs adequately. Most likely it is a little of both.

Subsequent analyses provided confirmation of the fit between these six constructs and their indicators and indicated validities - defined as the correlation between the composite of the items and the unmeasured construct - for the one four- and five five-item composites of the order of .9. Thus, one can feel reasonably confident that the theory, with slight modifications, is borne out in the data.

One can think of the quality of school life, then, in the following terms. Students at school experience a feeling of General well-being captured by notions of 'enjoyment'; 'feeling great'; being 'happy'; finding 'learning is a lot of fun'; and liking to be there. They also experience feelings of Negative affect at school, the experiences of depression, loneliness, of being upset, and of being restless. Students also experience feelings of well-being referenced to the four general domains of their school experience we defined. Feelings of Status are apparent in students' school experiences and are derived mainly from others. To the extent that others 'look up to', 'think a lot of', 'have confidence in' and seek the help of the student, he/she feels important and experiences feelings of well-being in this domain. Schools also provide for feelings of Identity when they make provision in their socialization structures for students to learn 'to get along with other people', 'accept people as they are', and know, learn and understand themselves. Theory and data showed their greatest discrepancy in the form of the unpredicted Teachers factor defined by Adventure and Opportunity items to do with teacher-student interaction. With hindsight such a factor is plausible given that teacher-student interaction occupies the greater portion of a student's school day. It follows that the quality of this interaction ought to be a matter of concern to students and an influence on their well-being. The meaning given to this domain by the items defining the factor centers on the equity of this interaction in the sense that teachers are fair and just in their dealings with students.

The remaining factor seems to be an adequate representation of the Opportunity dimension postulated by the Spady-Mitchell model. Student feelings of competence and the opportunities that follow are captured in notions of 'doing well enough to be successful', reaching a 'satisfactory standard', knowing the 'sorts of things I can do well' and knowing 'how to cope with the work'.

Obviously the overall measure has its problems. It did not capture the difference between General affect and Positive affect, most likely because we failed to distinguish between feelings about life in school overall, and the feelings arising out of happenings during the past week. However, this did not affect the Negative affect items which clearly identified a factor.

The failure to capture an Adventure domain is more problematic. Given that we found support for the other three components of the Spady-Mitchell model, we suspect it is the data rather than the theory that is at fault. In continuing work with this model and measure we will attempt to remedy this deficiency with items that call forth responses indicative of feelings about adventure in learning.

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TABLE I

Items, Item-Total Correlations and Reliability Estimates Within Scales for Version 2

Theoretical Domain Items	Item-Total Correlation
GENERAL AFFECT (G)	
I really like to go	.41
I feel good about things	.43
I feel happy	.54
I get enjoyment from being there	.55
Alpha reliability = .70	
POSITIVE AFFECT (P)	
I feel successful	.49
I feel proud of myself	.38
I get excited about things	.30
I feel that things go my way	.49
I feel great	.51
Alpha reliability = .67	
NEGATIVE AFFECT (N)	
I feel bored	.43
I feel lonely	.41
I feel restless	.50
I feel depressed	.57
I get upset	.50
Alpha reliability = .70	
STATUS (S)	
I act in a responsible way	.44
I feel important	.54
I try to do what is expected of me	.38
I know that people think a lot of me	.50
I feel I am a reliable person	.47
I feel confident	.37
people know they can depend on me	.38
I am thought of as a person who matters	.38
people have confidence in me	.59
peole come to me for help	.49
people look up to me	.47
I am trusted to work on my own	.35
I try to look after the interests of other students	.40
I am treated with respect	.52
Alpha reliability = .82	
IDENTITY (I)	
I know what my strengths and weaknesses are	.23
I feel I belong	.43
mixing with other people helps me to understand myself	.50
I feel proud to be a student	.41
I feel I have become a worthwhile person	.46

TABLE I - Continued

Item No.	Theoretical Domain Items	Item-Total Correlation
	IDENTITY (I) (Cont.)	
	I learn a lot about myself	.47
	I get to know myself better	.51
	I have good friends	.29
	I learn to get along with other people	.52
	other students are very friendly	.40
	other students accept me as I am	.46
	I am known by a lot of people	.26
	I have learnt to see other people's points of view	.45
	other students listen to what I say	.46
	I have learnt to accept other people as they are	.44
	Alpha reliability = .81	
	ADVENTURE (A)	
	I have learnt how to find whatever information I need	.45
	I like to do extra work in the subjects that interest me	.34
	I am interested in the work we do in class	.51
	I like to learn new things	.43
	I find that learning is a lot of fun	.38
	I get satisfaction from the school work I do	.48
	teachers are genuinely interested in what I do	.56
	teachers take a personal interest in helping me with my schoolwork	.51
	teachers help me to do my best	.59
	teachers encourage me to express my opinions	.48
	teachers take notice of me in class	.48
	teachers listen to what I say	.51
	teachers are friendly to me in class	.48
	Alpha reliability = .83	
	OPPORTUNITY (O)	
	I know how to cope with the work	.39
	learning is easy for me	.28
	I have learnt things that will be useful to me	.44
	I can learn whatever I need to know	.38
	I know I can reach a satisfactory standard in my work	.42
	I know the sorts of things I can do well	.35
	I know I can do well enough to be successful	.42
	I can learn what I need to get by in life	.40
	teachers are fair and just	.46
	teachers recognize any extra effort I make in my work	.43
	teachers treat me fairly in class	.50
	teachers give me the marks I deserve	.38
	I can talk to teachers about the way they mark my work	.47
	I can question the things that teachers say about my work	.37
	teachers treat all students equally	.38
	Alpha reliability = .79	

TABLE II

Factor Loadings from Exploratory Analysis. Stage 2

Theoretical Domain	Item	Factor Loading
	GENERAL AFFECT	
G	I get enjoyment from being there	.64
P	I feel great	.59
G	I really like to go	.56
A	I find that learning is a lot of fun	.56
G	I feel happy	.52
I	I feel proud to be a student	.50
I	I am interested in the work we do in class	.48
	NEGATIVE AFFECT	
N	I feel depressed	.69
N	I feel lonely	.55
N	I get upset	.52
N	I feel restless	.44
	STATUS	
S	people look up to me	.68
S	I know that people think a lot of me	.66
S	people have confidence in me	.47
S	people come to me for help	.46
S	I feel important	.46
S	I am treated with respect	.43
I	I feel I have become a worthwhile person	.48
P	I feel proud of myself	.47
P	I feel successful	.44
	IDENTITY	
I	I learn to get along with other people	.57
I	I have learnt to accept other people as they are	.56
I	I get to know myself better	.53
I	I learn a lot about myself	.51
I	mixing with other people helps me to understand myself	.50
I	I have learnt to see other people's points of view	.49
I	other students accept me as I am	.46
I	other students are very friendly	.42

(Continued)

TABLE II - Continued

Theoretical Domain	Item	Factor Loadings
	TEACHERS	
O	teachers treat me fairly in class	.72
O	teachers are fair and just	.67
A	teachers listen to what I say	.65
O	teachers give me the marks I deserve	.60
A	teachers help me do my best	.59
A	teachers take a personal interest in helping me with my school work	.55
A	teachers take notice of me in class	.53
O	teachers treat all students equally	.52
O	I can talk to teachers about the way they mark my work	.50
	OPPORTUNITY	
O	I know I can do well enough to be successful	.66
O	I know I can reach a satisfactory standard in my work	.66
O	I know the sorts of things I can do well	.46
O	I know how to cope with the work	.45
A	I get satisfaction from the school work I do	.40

TABLE III

Rotated Principal Axes Solution of Twenty-Nine Item Measure

Items	Factor Loadings						h^2
GENERAL AFFECT							
I get enjoyment from being there	.68						.63
I feel great	.63						.60
I really like to go	.56						.46
I find that learning is a lot of fun	.56						.50
I feel happy	.58						.57
NEGATIVE AFFECT							
I feel depressed		.70					.59
I feel lonely		.58					.39
I get upset		.52					.30
I feel restless		.43					.44
STATUS							
people look up to me			.71				.55
I know that people think a lot of me			.65				.56
people have confidence in me			.46				.38
people come to me for help			.50				.35
I feel important			.43				.42
IDENTITY							
I learn to get along with other people				.52			.39
I have learnt to accept other people as they are				.44			.26
I get to know myself better				.63			.54
I learn a lot about myself				.58			.48
mixing with other people helps me to understand myself				.54			.40
TEACHERS							
teachers treat me fairly in class					.77		.65
teachers are fair and just					.67		.51
teachers listen to what I say					.61		.49
teachers give me the marks I deserve					.60		.40
teachers help me do my best					.54		.42
OPPORTUNITY							
I know I can do well enough to be successful						.71	.58
I know I can reach a satisfactory standard in my work						.67	.54
I know the sorts of things I can do well						.48	.30
I know how to cope with the work						.46	.30
I get satisfaction from the school work I do						.41	.40
Proportion of Total Variance	9.5	5.8	7.1	7.6	9.1	7.3	
Proportion of Common Variance	20.4	12.5	15.2	16.4	19.8	15.8	

Notes

1 Six factors rotated to Varimax criteria

2 Only loadings greater than .4 are shown

TABLE IV

LISREL Measurement Models for the Six Scales

Item	Original Theoretical domain	λ_{ij} Factor loading	θ_{ii} Error variance	θ_{ij} Error covariance
GENERAL AFFECT				
I get enjoyment from being there	G	.82	.33	θ_{52} = .13
I feel great	P	.73	.47	
I really like to go	G	.68	.53	
I find that learning is a lot of fun	A	.65	.58	
I feel happy	G	.70	.51	
	Chi Square = 7.25	df = 4	p = .12	
NEGATIVE AFFECT				
I feel depressed	N	.80	.36	
I feel lonely	N	.5[illegible]	.67	
I get upset	N	.53	.72	
I feel restless	N	.58	.67	
	Chi Square = 3.30	df = 2	p = .19	
STATUS				
people look up to me	S	.82	.33	θ_{31} = -.17
I know that people think a lot of me	S	.66	.56	
people have confidence in me	S	.65	.58	θ_{51} = -.17
people come to me for help	S	.57	.67	
I feel important	S	.67	.55	θ_{54} = -.08
	Chi Square = .69	df = 2	p = .71	(Continued)

TABLE IV - Continued

Item domain	Original Theoretical loading	λ_{ij} Factor variance	θ_{ii} Error covariance	θ_{ij} Error
IDENTITY				
I learn to get along with other people	I	.48	.77	θ_{21} = .15
I have learnt to accept other people as they are	I	.44	.81	
I get to know myself better	I	.80	.36	
I learn a lot about myself	I	.73	.47	θ_{52} = .11
mixing with other people helps me to understand myself	I	.58	.67	
Chi Square = 4.68		df = 3	p = .20	
TEACHERS				
teachers treat me fairly in class	O	.83	.32	θ_{43} = .09
teachers are fair and just	O	.72	.48	
teachers listen to what I say	A	.63	.60	
teachers give me the marks I deserve	O	.61	.63	θ_{53} = .07
teachers help me to do my best	A	.61	.63	
Chi Square = 5.14		df = 3	p = .16	
OPPORTUNITY				
I know I can do well enough to be successful	O	.75	.44	
I know I can reach a satisfactory standard in my work	O	.74	.45	
I know the sorts of things I can do well	O	.53	.72	
I know how to cope with the work	O	.55	.70	
I get satisfaction from the school work I do	A	.55	.70	
Chi Square = 5.82		df = 5	p = .32	

TABLE V

Validity and Reliability Estimates for Factor Score Composites

Item	γ_{ij} Factor Loading	β_{ij} Standardized item weight Wt.	Unwt.	β_{ij} Metric item weights Wt.	Unwt.	ρ Validity Wt.	Unwt.	Ω Reliability Wt.	Unwt.
GENERAL AFFECT									
I get enjoyment from being there	.82	.43	.25	.33	1.00				
I feel great	.73	.22	.26	.16	1.00				
I really like to go	.68	.22	.27	.15	1.00	.92	.91	.84	.83
I find that learning is a lot of fun	.65	.19	.24	.15	1.00				
I feel happy	.70	.18	.25	.14	1.00				
	Chi Square	= 7.25	df = 4			p = .12			
NEGATIVE AFFECT									
I feel depressed	.80	.61	.34	.43	1.00				
I feel lonely	.57	.24	.33	.17	1.00	.87	.85	.76	.72
I get upset	.53	.20	.36	.14	1.00				
I feel restless	.58	.24	.35	.16	1.00				
	Chi Square	= 3.30	df = 2			p = .19			
STATUS									
people look up to me	.82	.53	.28	.41	1.00				
I know that people think a lot of me	.66	.12	.27	.10	1.00				
people have confidence in me	.65	.27	.23	.25	1.00	.95	.93	.91	.86
people come to me for help	.57	.12	.30	.09	1.00				
I feel important	.67	.30	.29	.23	1.00				
	Chi Square	= .69	df = 2			p = .71			

(Continued)

TABLE V - Continued

Item	γ_{ij} Factor Loading	β_{ij} Standardized item weight Wt.	Unwt.	β_{ij} Metric item weights Wt.	Unwt.	ρ Validity Wt.	Unwt.	Ω Reliability Wt.	Unwt.
IDENTITY									
I learn to get along with other people	.48	.10	.24	.04	1.00				
I have learnt to accept people as they are	.44	.11	.25	.05	1.00				
I get to know myself better	.80	.52	.30	.18	1.00	.89	.86	.79	.74
I learn a lot about myself	.73	.37	.31	.12	1.00				
mixing with other people helps me to understand myself	.58	.19	.29	.07	1.00				
	Chi Square	= 4.68	df = 3		p = .20				
TEACHERS									
teachers treat me fairly in class	.83	.49	.25	.37	1.00				
teachers are fair and just	.72	.29	.26	.20	1.00				
teachers listen to what I say	.63	.16	.27	.11	1.00	.91	.89	.83	.79
teachers give me the marks I deserve	.61	.16	.27	.11	1.00				
teachers help me to do my best	.61	.17	.26	.12	1.00				
	Chi Square	= 5.14	df = 3		p = .16				
OPPORTUNITY									
I know I can do well enough to be successful	.75	.40	.30	.27	1.00				
I know I can reach a satisfactory standard in my work	.74	.39	.27	.28	1.00				
I know the sorts of things I can do well	.53	.17	.27	.13	1.00	.89	.87	.79	.76
I know how to cope with the work	.55	.19	.25	.15	1.00				
I get satisfaction from the school work I do	.55	.18	.32	.11	1.00				
	Chi Square	= 5.82	df = 5		p = .32				

Table VI

Attenuated and Disattenuated Correlations Among Weighted Composites

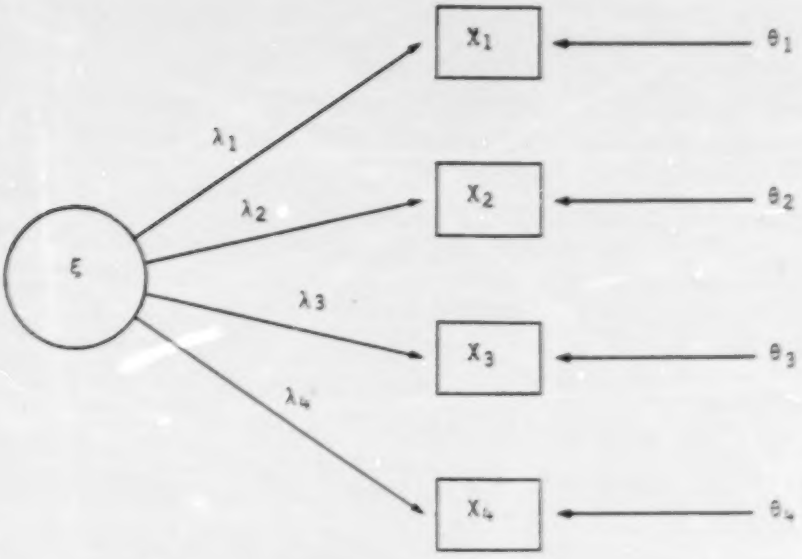
	1	2	3	4	5	6
1 General Affect		-.48	.51	.52	.48	.47
2 Negative Affect	-.60		-.26	-.27	-.31	-.35
3 Status	.58	-.31		.47	.32	.45
4 Identity	.63	-.35	.56		.43	.44
5 Teachers	.58	-.39	.37	.53		.36
6 Opportunity	.57	-.45	.54	.56	.44	
Mean	2.06	2.84	2.52	.85	1.89	1.66
Standard Deviation	.56	.56	.54	.24	.52	.43

Notes

Attenuated correlations above the diagonal, disattenuated correlations below the diagonal.

FIGURE 1. Measurement Models

General Form of the Measurement Model



Negative Affect

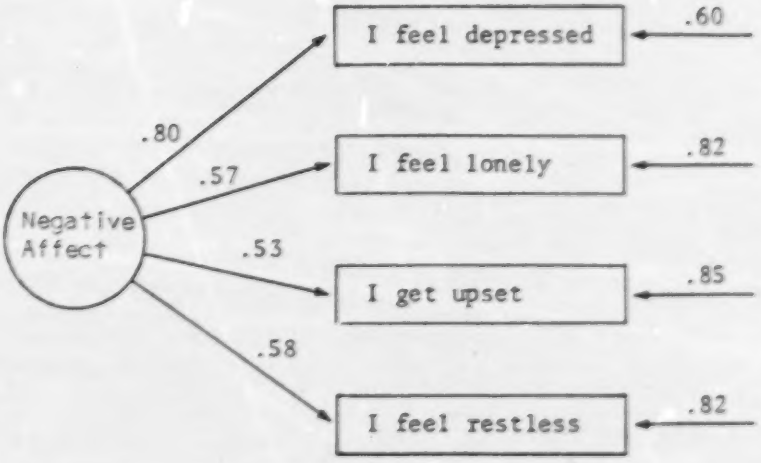
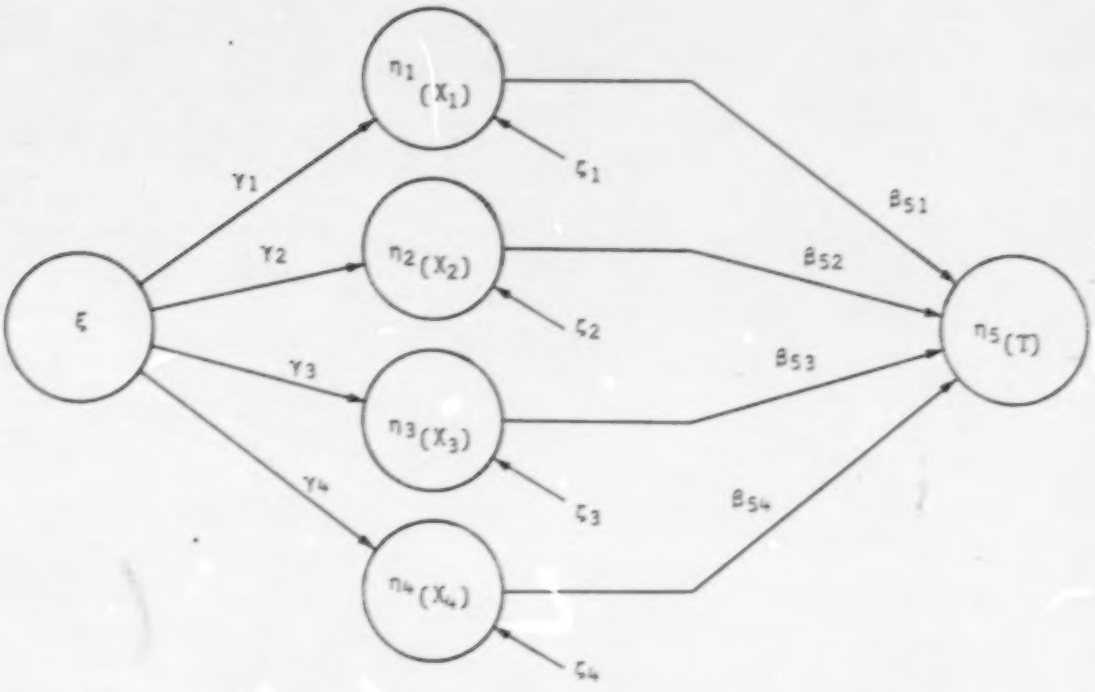


FIGURE 2. Validity Models for Composites

General Form of Validity Model



NEGATIVE AFFECT

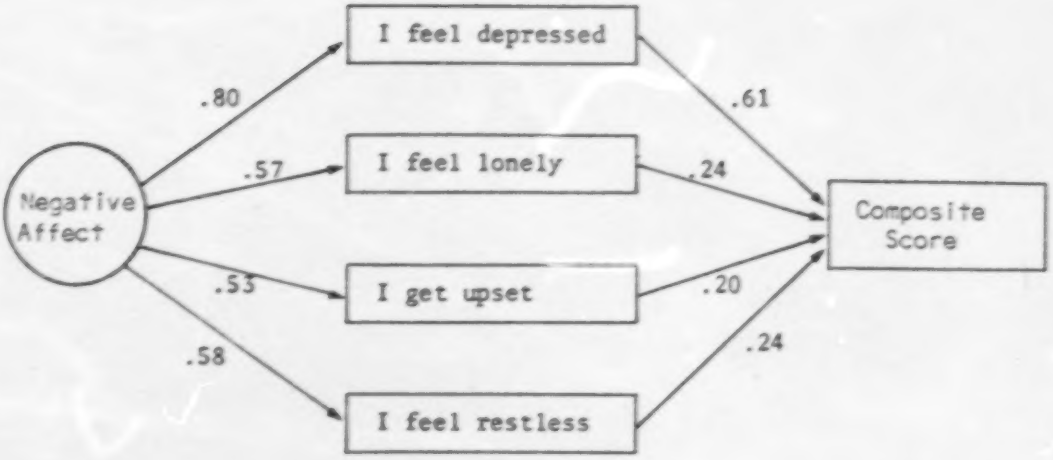


FIGURE 1. Measurement Models

FIGURE 2. Validity Models for Composites